

Serial No.: 09/887,831
Bartin et al.
CE08914R

AMENDMENT TO THE CLAIMS:

1. (Currently Amended) A method for transmitting data by a first communication device, the method comprising steps of:

~~receiving, from a second communication device, at the first communication device~~ a message in the a socket abstraction layer that from a second communication device wherein the message comprises socket information and that requests an establishment of a virtual connection between the second communication device and a destination device based on the socket information, and wherein the socket information comprises destination information without identifying the second communication device;

translating the message requesting an establishment of a virtual connection to a connection request wherein the connection request identifies the second communication device;

routing the connection request from the first communication device to the destination device identified by the socket information, wherein a virtual connection is established between the second communication device and the destination device, based on the connection request;

~~receiving, from the second communication device, at the first communication device~~ a data packet ~~that from the second communication device wherein the data packet~~ comprises a payload and does not include at least a portion of the socket information identifying the destination device;

generating at the first communication device a header in the socket abstraction layer that comprises missing socket information identifying the second communication device;

adding the header to the payload to produce a modified data packet; and

routing the modified data packet to the identified destination device.

2. (Original) The method of claim 1, wherein the socket information comprises a destination address and a destination port.

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3. (Original) The method of claim 2, wherein the socket information further comprises a protocol designation.
- 4-5. (Cancelled)
6. (Previously Presented) The method of claim 1, wherein the step of adding a header that comprises missing socket information comprises a step of adding a header that corresponds to at least a portion of a TCP/IP (Transmission Control Protocol/Internet Protocol) suite.
7. (Cancelled)
8. (Previously Presented) The method of claim 1, wherein the generated header is based on one of among a packet data convergence protocol (PDCP) context, a radio link protocol (RLP) context, and configuration information.
9. (Cancelled)
10. (Currently Amended) The method of claim 1, wherein the step of establishing a virtual connection comprises steps of:
 - receiving from the identified destination device an acknowledgement of the connection request routed to the identified destination device;
 - receiving a connection request from the identified destination device; and
 - acknowledging the connection request received from the identified destination device.
- 11-12. (Cancelled)
13. (Currently Amended) The method of claim 1, wherein the method further comprises steps of:

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receiving at the first communication device a data packet intended for the second communication device, which data packet comprises a payload intended for the second communication device and further comprises a header having socket information which identifies the virtual connection;

reducing a size of the header to produce a reduced-size data packet that comprises the payload; and

routing the reduced-size data packet to the second communication device.

14-17. (Cancelled)

18. (Original) The method of claim 1, wherein the message requesting an establishment of a virtual connection comprises an interprocess communication (IPC) message, and wherein the step of translating the message requesting an establishment of a virtual connection to a connection request comprises a step of translating the IPC message to a TCP/IP (Transmission Control Protocol/Internet Protocol) synchronize (SYN) datagram.

19-20. (Cancelled)

21. (Currently Amended) A method for transmitting data comprising steps of:

generating, by a first communication device, a message in the socket abstraction layer requesting an establishment of a virtual connection with a destination device identified by socket information, wherein the socket information comprises destination information without identifying the first communication device;

routing, by the first communication device to a second communication device, the message;

receiving, by the second communication device, the message;

translating, by the second communication device, the message requesting an establishment of a virtual connection to a connection request wherein the connection request includes socket information identifying the first communication device;

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routing, by the second communication device, the connection request to the destination device identified by the socket information, wherein a virtual connection is established based on the connection request;

generating, by the first communication device, a first reduced-size header data packet that comprises a first payload and does not include at least a portion of the socket information identifying the destination device;

routing, by the first communication device to the second communication device, the first reduced-size header data packet;

receiving, by the second communication device, the first reduced-size header data packet;

generating, by the second communication device, a header that includes the missing socket information identifying the first communication device;

adding, by the second communication device, the header that includes the missing socket information to the payload to produce a modified data packet; and

routing, by the second communication device, the modified data packet to the identified destination device.

22. (Original) The method of claim 21, wherein the method further comprises steps of:

receiving, by the second communication device, a data packet intended for the first communication device, which data packet comprises a second payload intended for the first communication device and further comprises a header having socket information and;

reducing, by the second communication device, a size of the header to produce a second reduced-size data packet that comprises the second payload; and

routing, by the second communication device, the second reduced-size data packet to the first communication device.

23. (Original) The method of claim 22, wherein the step of reducing a size of the header comprises a step of terminating, by the second communication device, at least a

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portion of the socket information included in the data packet to produce a second reduced-size data packet that comprises the second payload.

24. (Cancelled)

25. (Currently Amended) A communication device capable of operating in a fixed infrastructure of a wireless communication system, the communication device having a processor capable of receiving a message in a socket abstraction layer from a different communication device, wherein the message comprises socket information and requests an establishment of a virtual connection with a destination device based on the socket information, and wherein the socket information comprises destination information and does not include information identifying the different communication device, translating the message in the socket abstraction layer requesting an establishment of a virtual connection to a connection request wherein the connection request includes information identifying the different communication device, routing the connection request to the destination device identified by the socket information, wherein a virtual connection is established based on the connection request, receiving, from the different communication device, a data packet that comprises a payload and does not include at least a portion of the socket information identifying the destination device, generating a header that comprises missing socket information including information identifying the different communication device, adding the header to the payload to produce a modified data packet, and routing the modified data packet to the identified destination device.

26. (Original) The communication device of claim 25, wherein the communication device consists of one of a base station, a system controller, an access gateway, and a data router.

27-31. (Cancelled)

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32. (Currently Amended) The communication device of claim 25, wherein the generated header is based on one of among a packet data convergence protocol (PDCP) context, a radio link protocol (RLP) context or configuration information.

33. (Cancelled)

34. (Previously Presented) The communication device of claim 25, wherein the addition of a header comprises adding headers corresponding to a TCP/IP (Transmission Control Protocol/Internet Protocol) suite.

35. (Currently Amended) The communication device of claim 25, wherein the establishment of a virtual connection comprises receiving an acknowledgement of the connection request conveyed to the identified destination device, receiving a connection request from the identified destination device, and acknowledging the connection request received from the identified destination device.

36-37. (Cancelled)

38. (Original) The communication device of claim 25, wherein the processor is further capable of receiving a data packet intended for the different communication device, which data packet includes socket information associated with a client application running on the different communication device and a payload intended for the client application, reducing a size of the header to produce a reduced-size data packet that comprises the payload, and routing the reduced-size data packet to the different communication device.

39-42. (Cancelled)

43. (Original) The communication device of claim 25, wherein the message requesting an establishment of a virtual connection comprises an interprocess

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communication (IPC) message, and wherein the translation of the message requesting an establishment of a virtual connection to a connection request comprises translating the IPC message to a TCP/IP (Transmission Control Protocol/Internet Protocol) synchronize (SYN) datagram.

44. (Original) The communication device of claim 25, wherein an application layer that comprises a socket abstraction layer and a network stack that interfaces with the socket abstraction layer are implemented in the processor, and wherein a transport layer and a network layer of the network stack comprises a packet data convergence protocol (PDCP) layer.

45. (Cancelled)

46. (Original) The communication device of claim 25, wherein an application layer that comprises a socket abstraction layer and a network stack that interfaces with the socket abstraction layer are implemented in the processor, and wherein the network stack comprises a Radio Link Protocol (RLP) layer.

47-60. (Cancelled)

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